



# RAILROAD COMMISSION OF TEXAS

## OFFICE OF GENERAL COUNSEL

**OIL AND GAS DOCKET NO. 01-0275282**

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**THE APPLICATION OF JEMEZ, LLC FOR COMMERCIAL DISPOSAL AUTHORITY  
PURSUANT TO STATEWIDE RULE 9 FOR THE R. D. TUCKER UNIT, WELL NO. 1,  
PILGRIM (AUSTIN CHALK) FIELD, GONZALES COUNTY, TEXAS**

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**HEARD BY:** Richard D. Atkins, P.E. - Technical Examiner  
Michael Crnich - Legal Examiner

**APPEARANCES:**

**REPRESENTING:**

**APPLICANT:**

George C. Neale  
Christopher Hotchkiss  
Gregg Cloud  
Jeff Bookout  
Keith Wheeler

Jemez, LLC

**PROTESTANTS:**

Greg Sengelmann

Gonzales County Underground Water  
Conservation District

Ken Fischer

Self

Keith and Dawlean Richardson

Selves

**PROCEDURAL HISTORY**

Application Filed:	January 26, 2012
Protest Received:	January 5, 2012
Request for Hearing:	February 7, 2012
Notice of Hearing:	March 28, 2012
Hearing Held:	May 17, 2012
Transcript Received:	May 31, 2012
Proposal for Decision Issued:	June 19, 2012



**EXAMINERS' REPORT AND PROPOSAL FOR DECISION****STATEMENT OF THE CASE**

Jemez, LLC ("Jemez") requests commercial disposal authority pursuant to Statewide Rule 9 for the R. D. Tucker Unit, Well No. 1, Pilgrim (Austin Chalk) Field, Gonzales County, Texas.

Notice of the subject application was published in the *Gonzales Inquirer*, a newspaper of general circulation in Gonzales County, on December 9 & 30, 2011. Notice of the application was sent to the Gonzales County Clerk, offset operators within 1/2 mile and to the surface owners of each tract which adjoins the disposal tract on January 26, 2012.

The application is protested by the Gonzales County Underground Water Conservation District and surface owners close to, but not adjacent to, the tract on which the proposed disposal well is located.

**DISCUSSION OF THE EVIDENCE****Applicant's Evidence**

The proposed disposal well is located on a 10 acre tract adjacent to and east of FM 1116. The tract is in a rural area and is situated approximately 12 miles south of the town of Gonzales, Texas. Jemez plans to re-enter the R. D. Tucker Unit, Well No. 1, an Austin Chalk formation well, that was completed in November 1990 and plugged in September 1993. The well has 10 3/4" surface casing set at 850 feet that is cemented to the surface with 425 sacks of cement. The well also has 7" production casing set at 8,363 feet that is cemented to 6,188 feet and from a DV Tool set at 3,264 feet to surface. Jemez proposes to set a cement plug inside the 7" production casing from 6,282 feet to 6,332 feet and squeeze cement the 7" production casing at 4,870 feet with 175 sacks of cement. The cement squeeze will result in an estimated top of cement behind the 7" production casing at 4,270 feet. Jemez then plans to run a 5 1/2" casing liner inside the 7" production casing down to 4,870 feet and cement the 5 1/2" casing liner to the surface with 265 sacks of cement. The well will be equipped with 3 1/2" tubing and packer set at 4,820 feet (See attached Jemez Exhibit No. 6 - Wellbore Diagram).

The proposed disposal interval is located in the Wilcox formation from 4,870 feet to 6,282 feet. An east-west and north-south cross-section across an area of approximately two miles demonstrates that the proposed Wilcox disposal interval is continuous and contains many sand intervals with an estimated total thickness over 600 feet. The interval is suitable for disposal and is used for disposal in other area wells. Additionally, there is approximately 800 feet of shale above the proposed disposal interval and the base of

usable-quality ground water, which will serve to prevent the migration of injected fluids out of the disposal interval. Jemez requested authority to dispose of a maximum of 15,000 barrels of saltwater and RCRA exempt waste per day with a maximum surface injection pressure of 2,435 psig.

The Commission Groundwater Advisory Unit ("GAU") recommends that usable-quality groundwater be protected down to a depth of 3,300 feet below the land surface. The base of the underground source of drinking water ("USDW") is 4,200 feet. Jemez submitted a Commission letter dated January 24, 2012, which stated that injection into the proposed injection interval will not harm usable-quality groundwater.

There are two wells, one producing and one plugged, Austin Chalk formation horizontal wells located within the 1/4 mile radius of review for the proposed disposal well. There are two additional wells, one producing and one shut-in, Austin Chalk formation horizontal wells located within the 1/2 mile radius of review. According to Commission records, the one plugged well was drilled in 1982 and has been properly plugged. There are approximately ten producing Austin Chalk formation horizontal wells and ten permitted horizontal Eagle Ford formation wells located within one mile of the proposed disposal well.

The proposed Jemez facility is located in the southeast portion of Gonzales County. There are only three active commercial disposal wells in southeast Gonzales County and the wells are located between 10 and 30 miles of highway distance from the proposed facility. Jemez stated that there are significant wait times at the existing facilities and one of the facilities is for the private use of only Bess Environmental. Additionally, water hauled to one of the commercial disposal wells must travel through several small towns in Gonzales County. Jemez noted that there are currently six permitted disposal wells in southeast Gonzales County. Three of the well facilities are under construction and three are only permits with no ongoing construction activities. Use of the proposed well will eliminate substantial truck traffic through the small towns, and less travel time and fewer miles result in reduced costs to operators.

The Eagle Ford development core area encompasses all of southeast Gonzales County and the two adjoining Counties of De Witt and Karnes. Jemez submitted a map depicting over 100 permitted Eagle Ford Formation horizontal wells and completion papers on three nearby EOG Resources' Eagle Ford formation wells. The wells were fraced with 200,000 BW and averaged around 1,000 BWPD during initial flowback. Jemez estimated that 20 million barrels of frac water would be recovered from the permitted wells. Jemez opined that the Eagle Ford trend wells will produce significant volumes of frac and produced water and believes that additional disposal facilities are necessary to accommodate the Eagle Ford development that is expected in this area.

### **The Facility**

The area surrounding the proposed injection facility is rural ranching and farming land. Access to the disposal facility will be off of FM 1116, which is a paved two lane public highway. The surface facility will comply with all permit conditions requested by the

Commission staff. At an average injection rate of 10,000 BWPD, there will be approximately 80 trucks per day accessing the facility. The facility will have a circular driveway and will be of sufficient size to allow trucks access without having to wait on the highway. There is approximately 1/2 mile of sight distance in both directions on FM 1116 and the entrance to the facility previously received a TxDOT access permit when the proposed disposal well was originally drilled.

Jemez submits that it has the expertise to build and manage the proposed facility. Jemez has a current approved Form P-5 (Organization Report), posted a \$25,000 cash financial assurance and no pending Commission enforcement actions.

### **Protestants' Evidence**

Greg Sengelmann represents the Gonzales County Underground Water Conservation District and the District is primarily concerned with the protection of the fresh water and brackish water resources in Gonzales County. The brackish water contains 3,000 to 10,000 ppm chlorides and occurs from 3,300 feet down to 4,200 feet. Mr. Sengelmann felt that injection into the proposed injection interval would contaminate potential brackish water supplies. He stated that the District was investigating the development of the brackish water resources to make it potable by reducing the chlorides down below 1,000 ppm.

The other protestants are surface owners close to, but not adjacent to the proposed disposal site. They are primarily concerned that the facility will pose a threat to their usable-quality groundwater and that the presence of the facility will decrease their property values. They are also concerned that a spill could contaminate the surface water, as drainage from the facility would flow across their property. They are also worried about traffic safety, as a result of the increased number of trucks on the road going to the facility. In addition, they are concerned that noise, dust and fumes from the facility will affect their quality of life.

### **EXAMINERS' OPINION**

The examiners recommend that the application for commercial disposal authority be approved. Jemez has established:

1. The water resources (surface and sub-surface) are adequately protected from pollution;
2. The proposed injection well will not endanger or injure any oil, gas, or mineral formations;
3. The proposed injection is in the public interest;
4. A satisfactory showing of financial responsibility, as required under Commission statutes.

The proposed disposal well will be completed in a manner which will protect usable-quality water resources and injected fluids will be confined to the injection interval. The useable-quality groundwater has a chloride content of less than 3,000 ppm, while the USDW has a chloride content between 3,000 and 10,000 ppm. The GAU recommends protection of the useable-quality groundwater to a depth of 3,300 feet. The proposed disposal well has 850 feet of surface casing that is cemented to surface and has 7" production casing that is cemented to surface from a DV Tool set at 3,264 feet. Jemez proposes to squeeze cement the 7" production casing at 4,870 feet with 175 sacks of cement. The cement squeeze will result in an estimated top of cement behind the 7" production casing at 4,270 feet. The reference to the base of the USDW at 4,200 feet in the January 24, 2012, letter is simply information provided by the GAU to insure that there is no disposal of fluids into any USDW zone.<sup>1</sup>

The proposed disposal well will have cement behind the casing liner to surface and there is approximately 800 feet of shale above the proposed disposal interval and the base of usable-quality ground water. Injection will be through tubing set on a packer to confine injected fluids to the Wilcox interval between 4,870 feet to 6,282 feet. Finally, there are only one producing and one plugged Austin Chalk formation horizontal wells located within the 1/4 mile radius of review for the proposed disposal well. According to Commission records, the one plugged well was drilled in 1982 and has been properly plugged.

Approval of the application is in the public interest. The Eagle Ford development core area encompasses all of southeast Gonzales County and the two adjoining Counties of De Witt and Karnes. Jemez has shown that the proposed disposal wells are necessary to provide needed capacity for disposal of frac and produced water from numerous wells to be drilled and produced within Gonzales and surrounding counties. The proposed disposal well is closer to a vast majority of recently permitted wells than any other commercial disposal well and the three existing commercial disposal wells in Gonzales County have a limited capacity. Use of the proposed well will eliminate substantial truck traffic through the small towns in southeast Gonzales County and less travel time and fewer miles results in reduced costs to operators. Reduced costs will lower the economic limit of the producing wells and thereby increase the ultimate recovery of reserves.

The surface facility will be newly constructed and is of sufficient size to accommodate trucks hauling water to the facility without creating a traffic hazard on the highway that provides access to the facility. There is approximately 1/2 mile of sight

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<sup>1</sup> This issue has been raised previously in **Oil and Gas Docket No. 04-0267765**; *The Application of J & R Contractors for Commercial Disposal Authority Pursuant to Statewide Rule 9 for the Zapata SWD Lease, Well No. 2, Falcon Lake, N. (Wilcox 6400) Field, Zapata County, Texas* - Final Order dated April 6, 2011 (See D. Chandler's Proposal for Decision dated February 16, 2011, Examiners' Opinion on page 4).



distance in both directions on FM 1116 and the entrance to the facility previously received a TxDOT access permit when the proposed disposal well was originally drilled.

Compliance with permit conditions will minimize the risk of spills at the facility and will prevent the migration of any spills that occur, thereby protecting both ground and surface water.

### **FINDINGS OF FACT**

1. Notice of the subject application was published in the *Gonzales Inquirer*, a newspaper of general circulation in Gonzales County, on December 9 & 30, 2011.
2. Notice of the application was sent to the Gonzales County Clerk, offset operators within 1/2 mile and to the surface owners of each tract which adjoins the disposal tract on January 26, 2012.
3. The proposed injection into the R. D. Tucker Unit, Well No. 1, will not endanger useable quality water.
  - a. The Commission Groundwater Advisory Unit ("GAU") recommends that usable-quality groundwater be protected to a depth of 3,300 feet below the land surface.
  - b. The well has 10 3/4" surface casing set at 850 feet that is cemented to the surface with 425 sacks of cement.
  - c. The well also has 7" production casing set at 8,363 feet that is cemented to 6,188 feet and from a DV Tool set at 3,264 feet to surface.
  - d. Jemez, LLC ("Jemez") proposes to set a cement plug inside the 7" production casing from 6,282 feet to 6,332 feet and squeeze cement the 7" production casing at 4,870 feet with 175 sacks of cement.
  - e. The cement squeeze will result in an estimated top of cement behind the 7" production casing at 4,270 feet.
  - f. There is approximately 800 feet of shale above the proposed disposal interval and the base of usable-quality ground water, which will serve to prevent the migration of injected fluids out of the disposal interval.
4. The proposed injection into the R. D. Tucker Unit, Well No. 1, will not endanger production from other oil, gas or mineral bearing formations.

- a. Jemez plans to run a 5 1/2" casing liner inside the 7" production casing down to 4,870 feet and cement the 5 1/2" casing liner to the surface with 265 sacks of cement.
  - b. The well will be equipped with 3 1/2" tubing and packer set at 4,820 feet.
  - c. There are two wells, one producing and one plugged Austin Chalk formation horizontal wells, located within the 1/4 mile radius of review for the proposed disposal well.
  - d. There are two additional wells, one producing and one shut-in Austin Chalk formation horizontal wells, located within the 1/2 mile radius of review.
  - e. According to Commission records, the one plugged well was drilled in 1982 and has been properly plugged.
5. Use of the R. D. Tucker Unit, Well No. 1, as a commercial disposal well is in the public interest because it will reduce hauling distances and will provide needed commercial disposal capacity for wells to be drilled, completed and produced in the area of the proposed facility.
- a. There are only three active commercial disposal wells in southeast Gonzales County and the wells are located between 10 and 30 miles of highway distance from the proposed facility.
  - b. There are significant wait times at the existing facilities and one of the facilities is for the private use of only Bess Environmental.
  - c. Water hauled to one of the commercial disposal wells must travel through several small towns in Gonzales County.
  - d. The Eagle Ford development core area encompasses all of southeast Gonzales County and the two adjoining Counties of De Witt and Karnes. There are over 100 permitted Eagle Ford formation horizontal wells located in the area.
  - e. Jemez estimates that 20 million barrels of frac water will be recovered from the permitted wells.
  - f. Use of the proposed well will eliminate substantial truck traffic through the small towns located in southeast Gonzales County and less travel time and fewer miles result in reduced costs to operators. Reduced

costs will lower the economic limit of the producing wells and thereby increase the ultimate recovery of reserves.

6. Jemez has a current approved Form P-5 (Organization Report), posted a \$25,000 cash financial assurance and no pending Commission enforcement actions.

**CONCLUSIONS OF LAW**

1. Proper notice was issued in accordance with the applicable statutory and regulatory requirements.
2. All things necessary to give the Railroad Commission jurisdiction to consider this matter have occurred.
3. Approval of the application will not harm useable quality water resources, will not endanger oil, gas, or geothermal resources, will promote further development in this area of Gonzales County and is in the public interest pursuant to Sec. 27.051 of the Texas Water Code.
4. Jemez, LLC has met its burden of proof and its application satisfies the requirements of Chapter 27 of the Texas Water Code and the Railroad Commission's Statewide Rule 9.

**EXAMINERS' RECOMMENDATION**

Based on the above findings of fact and conclusions of law, the examiners recommend that the Commission approve the application of Jemez, LLC for commercial disposal authority pursuant to Statewide Rule 9 for the R. D. Tucker Unit, Well No. 1, as set out in the attached Final Order.

Respectfully submitted,



Richard D. Atkins, P.E.  
Technical Examiner



Michael Crnich  
Legal Examiner



3.5" tubing on packer

Packer

7" casing @ 8363'